

AMENDMENTS TO THE CLAIMS

Claims 1-13 (Canceled)

¹
 Claim ~~14~~ (Currently Amended): In an electronic device having a processor coupled to a computer readable memory for implementing steps, a method of calculating a transform matrix for transforming a field vector from a second field to a field vector in a first field, the method comprising the steps of:

- a) receiving a reference code state chosen for the first field;
- b) generating a first field vector of the reference code state;
- c) iterating a linear feedback shift register (LFSR) state from the first field vector to form a new LFSR state;
- d) generating a new field vector from the new LFSR state;
- e) assembling the first field vector and the new field vector into ~~a~~ the transform matrix, the assembling step comprising the steps of:

- e1) providing the first field vector as the bottom row in the transform matrix;
- e2) providing the new field vector as the next highest row in the transform matrix;

and

e3) repeating providing step e2) a total of N-2 times for a total of N rows in the transform matrix, wherein N is an integer, ^{greater than or equal to 2} and

f) repeating steps c) ~~through and~~ d) a quantity of N times, wherein N is a degree of a polynomial defining the first field and the second field.

Claims 15-33 (Canceled)

²
 Claim ~~34~~ (Currently Amended): An electronic device for generating a mask for a linear feedback shift register (LFSR), the electronic device comprising;

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a processor;

a computer readable memory unit coupled to the processor, the computer readable memory^{unit} containing program instructions stored therein that, when executed via the processor, implements a method of calculating a transform matrix for transforming a field vector from a second field to a field vector in a first field, the method comprising the steps^{of}:

- a) receiving a reference code state chosen for the first field;
- b) generating a first field vector of the reference code state;
- c) iterating an LFSR state from the first field vector;
- d) generating a new field vector from the new LFSR state;
- e) assembling the first field vector and the new field vector into a the transform matrix, the assembling step comprising the steps of:
 - e1) providing the first field vector as the lowest row in the transform matrix;
 - e2) providing the new field vector as the next highest row in the transform matrix; and
 - e3) repeating providing step e2) a total of N-2 times for a total of N rows in the transform matrix, wherein N is an integer^{greater than or equal to 2}; and
- f) repeating steps c) ~~through~~ and d) a quantity of N times, wherein N is ~~the~~ a degree of ~~the~~ a polynomial defining the first field and the second field.

Claims 35-41 (Canceled)